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Alexis L Perry
Printed name of person transmitting correspondence


Signature of person transmitting correspondence

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Peter Wernet	Art Unit:	1633
Serial No.:	09/985,335	Examiner:	Quang Nguyen
Filed:	November 2, 2001	Customer No.:	21559
Title:	HUMAN CORD BLOOD DERIVED UNRESTRICTED SOMATIC STEM CELLS (USSC)		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF MOREY KRAUS
UNDER 37 C.F.R. § 1.132

I, MOREY KRAUS, declare:

1. I am currently the Vice President and Chief Technical Officer at ViaCell, Inc., which is a biotechnology company I founded and which is the current owner of the above-referenced application. I have over 10 years of experience working with stem cells.

2. I have read and understood the Office Action, dated October 28, 2005,

which was issued in connection with U.S. Serial No. 09/985,335. This Declaration is presented to overcome the rejection of claims 1, 3, 6, and 9 under 35 U.S.C. § 102(b) for anticipation by Bruder et al. (WO 97/39104; hereinafter “Bruder”) in combination with Ha et al. (U.S. Patent Application Publication No. 2005/0118714; hereinafter “Ha”).

3. Bruder describes the isolation and identification of a particular population of cells, mesenchymal stem cells (MSCs), from human bone marrow. USSCs, in contrast, are cells first isolated by the inventor of the above-referenced application, Dr. Peter Wernet. Dr. Wernet obtained USSCs from human umbilical cord blood by isolating mononuclear cells and then further isolating adherent cells. USSCs and Bruder’s MSCs are distinctly different cells. The distinctions of which I am currently aware are:

- a. MSCs are obtained, and obtainable only from bone marrow. USSCs are not obtained from tissue, such as bone marrow, from a human donor, but rather from umbilical cord blood or placental blood, which contains cells that have not yet migrated to a site in a human body to become cells specialized for functioning at that site.
- b. Two cellular markers, hyaluronan synthase 1 (HAS1) and CD106, are expressed by MSCs but not by USSCs (see Figure 1 and Pittenger et al. (Circulation Research 95:9-10, 2004; a copy of which is enclosed).
- c. USSCs, which are approximately 30% larger than MSCs, are morphologically distinct (see Figure 2).
- d. Upon passage in culture, the telomeres of USSCs lengthen (through at least 13 passages), whereas the telomeres of MSCs, upon passage in culture (through at least 9 passages), do not (see Figure 3).

4. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Respectfully submitted,

Date: 04/25/06

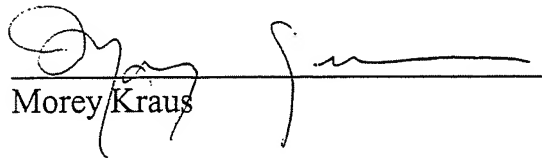

Morey/Kraus

Figure 1



Figure 2

USSC
from Placental Cord Blood



MSC
from Bone Marrow

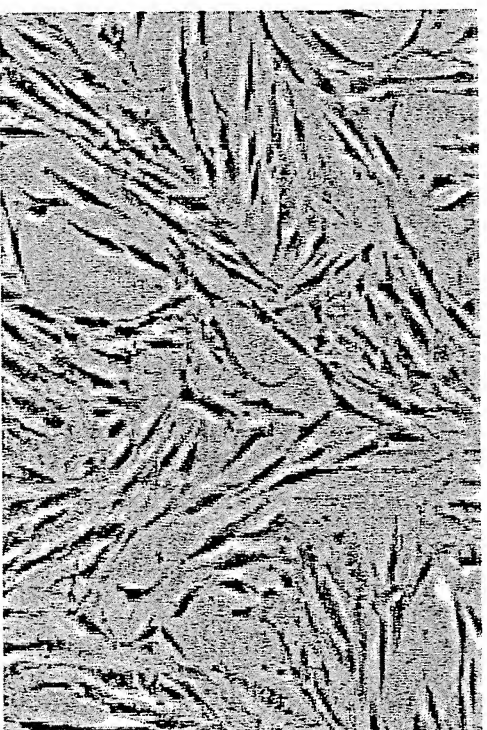


Figure 3

